# *Alber® BDSi™*

*Battery Monitoring System For UPS Battery Cabinet Integration*

**Alber technologies by Emerson Network Power are designed to prevent battery failure, optimize useful battery life, reduce maintenance costs and increase safety.**

The Alber BDSi is designed specifically for factory integration into Liebert UPS battery cabinets for 12 and 16 volt battery applications. A factory installed monitor continuously scans and reports all critical battery parameters, providing detailed reports that allow proactive battery management. The result: a reliable, effective system that is efficient to deploy.

**Alber BDSi Battery Monitoring provides real time information for proactive battery management**

## Key Features of Alber BDSI:

### Flexibility

- Web-based monitoring interface allows easy user access to data and reports
- A single controller unit communicates with up to six DCM/LM units, for monitoring of a total of six battery cabinets
- Factory installed, or field installation kits available for Liebert UPS battery cabinets

### Higher Availability

- Factory installation and testing ensures proper operation at start up
- Data tracking and detailed reports allow analysis for proactive prevention of battery failure

### Lowest Total Cost of Ownership

- Replace batteries when they are at the end of their service life — not by calculations that could result in premature or late replacement
- Complete factory installation eliminates requirement of field installation

### Ideally Suited for:

- Liebert UPS external battery cabinets
  - Liebert NXL
  - Liebert NX
  - Liebert APM
  - Liebert 16V battery cabinet

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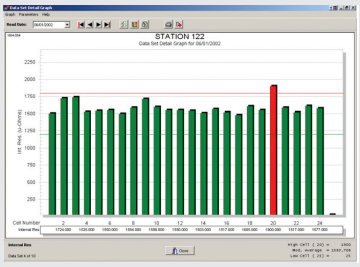
# *Simple hardware configuration*

**User-friendly software provides easy to interpret data**

Battery Monitor Data Manager (BMDM) Computer Software is included with every system. With the software you can program thresholds, view graphs and trends to identify failing batteries, set alarms notifications and distribute reports. The reports have built-in decision support that analyzes the data and provides suggestions for the best corrective action.




**Easy to interpret graphs make data understandable and manageable**

The Alber BDSi system consists of two units: a Controller, and a Data Collector Module/Load Module (DCM/LM).

- The Alber BDSi Controller stores the data, provides alarms, power and communication connections

- The DCM/LM unit collects individual cell data and performs the resistance test.

The first battery cabinet includes both an Alber BDSi Controller and Alber BDSi DCM/LM. Each additional battery cabinet uses only an Alber BDSi DCM/LM unit linked to the single Controller Unit in the first battery cabinet. A Controller can communicate with up to six DCM/LM units or battery cabinets. Communication options are by Ethernet network card, RS-232 or dial-up modem.

**Liebert NXL battery cabinet with Alber BDSi Battery Monitor. First battery cabinet (center) with Controller and DCM/LM. Additional battery cabinet (right) with DCM/LM only.**

**Liebert APM battery cabinet with DCM/LM (top) and Controller (bottom)**

# *BDSi Specifications*

**Sealed batteries are sensitive to temperature and float voltage settings. Monitoring these conditions can considerably extend useful battery life.**

A Liebert battery monitor provides the user with detailed information, allowing for cost savings by optimizing useful battery life. Instead of waiting for an inevitable failure or replacing batteries prematurely to prevent problems, you can continue to utilize your batteries longer and with confidence by knowing their true internal condition.

It is essential to detect deterioration at an early stage to prevent catastrophic failures when dealing with sealed batteries. This makes measurement technology the most important consideration when selecting a monitoring system. Other battery monitors' internal ohmic readings become inconsistent as the UPS load varies because of variations in AC ripple on the battery. The Albér DC resistance test method is not influenced by ripple and thus provides data that is repeatable and reflects the true condition of the battery.

| **Power** | |
|---|---|
| ■ Less than 2.0 amps at 115 VAC ±10% 60Hz or 230 VAC +/- 10% 60Hz | |
| ■ Configurations: 40, 12-volt or 30, 16-volt jars per string | |
| **Inputs** | |
| ■ Remote alarm reset: User-supplied 12 to 32V signal. (Less than 50ma.) | |
| ■ Momentarily applying voltage initiates the reset action | |
| **Outputs** | |
| ■ 24 VAC power: For up to six Data Collector Module Units | |
| ■ Alarm contacts: Two Form C: 2A at 30VDC.(One for critical alarm; one for maintenance alarm.) | |
| **Communication** | |
| ■ Modbus protocol, ASCII to PC, and SNMP via Ethernet | ■ Local/LAN port, RS-232 DB-9 connector (rear panel) |
| ■ LAN port, RJ-45 | ■ RJ-11 Telco line, internal modem (optional) |
| ■ USB for local PCV connection. | |
| **Data Storage** | |
| ■ SRAM (8 MB) nonvolatile memory for all configuration settings and test data | |
| ■ Holds up to one year's worth of data | |
| ■ Flash memory for firmware upgrades | |
| **Operating Environment** | |
| ■ Temperature range: 5°C to 40°C (41°F to 104°F) | ■ Indoor use only |
| **Parameters/Features** | |
| ■ Number of cell channels: Up to six strings of 40, 12 volt jars or 30, 16 volt jars | |
| **Measurement Range/Accuracy** | |
| ■ Cell voltage: 0 - 16V, 0.15% of reading ±4mV | ■ Current transducer is required. |
| ■ Cell Resistance 0 - 32000 µ½, 5% of reading ±5µ½ | ■ Transducer accuracy affects overall current reading accuracy. |
| ■ String voltage: 0 - 400V, 0.1% of reading ±.1V 0 - 600V, 0.2% of reading ±.5V | ■ Float Current: 0 - 5000mA, ±0.1% of reading (Optional) |
| ■ Discharge Current: 0 - 600V, 0.1% of reading ±6A 0 -1000V, 0.1% of reading ±10A | |
| **Packaging** | |
| ■ Controller unit: 19.5"W (495.3mm) x 11.81"D (299.9mm) x 3.38"H (85.9mm) | |
| ■ Data Collector Module unit: 19.5"W (495.3mm) x 12.06"D (306.3mm) x 5.09"H (129.3mm) | |
| **Agency Approvals** | |
| ■ UL listed | ■ CE approved |

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